GARDEN AND FOREST.

PUBLISHED WEEKLY BY

THE GARDEN AND FOREST PUBLISHING CO.

OFFICE: TRIBUNE BUILDING, NEW YORK.

Conducted by . . . . . Professor C. S. SARGENT.

ENTERED AS SECOND-CLASS MATTER AT THE POST OFFICE AT NEW YORK, N. Y.

NEW YORK, WEDNESDAY, JULY 20, 1892.

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The Love of Nature.

ONE of the noticeable characteristics of this century is a growing love of natural scenery, but it may be questioned whether the love of nature is also growing, for a distinction must be made between the two. The first is a simple emotion—an instinct rather than a faculty—and, like all primitive instincts, it lies at the very foundation of being, having its roots somewhere in that mysterious region below consciousness. Perhaps it is stronger among the savage than it is among the civilized races of the world, but it is yet the birthright of every healthy child.

The appreciation of natural scenery, on the other hand, is a complex emotion which involves thought, memory and imagination, and as it rarely manifests itself in childhood it probably did not exist in the childhood of the race. Wherever this appreciation is found, whether among modern nations, among the Hebrews as indicated in their literature, or among the Greeks and Romans, as is evident from the skillful way in which their architectural creations were placed with reference to their natural surroundings, it is the outcome of an advanced, perhaps of a decaying, civilization. The towering mountain stirs the imagination of the boy, but it is to deeds of exploration and adventure. The dense forest lures him, but its chief attraction is the game it covers. The brook which sparkles through the meadows delights him, because it turns his water-wheel or excites his hope as an angler. And yet, blind as he may seem to the grandeur of the one or the beauty of the others, mountain, grove and stream, each plays its part in molding the boy's taste and character, and in after years he will be drawn to them by a deeper love, because they are inseparably blended with the careless happiness of childhood and youth. It is through some experience like this that the race has passed. Earth first ministers to man's necessities; in so doing it develops his faculties and awakens new powers, until at last, when he has gained dominion over it, the ability to discern its beauty comes with the leisure to enjoy it.

The pleasure which springs from the contemplation of a beautiful landscape differs in kind with each spectator. It may have no deeper source than the mere love of beauty, and it is then refreshing to the jaded spirit simply because the beauty is pure and appeals to no sordid or material interest. But when to the beauty of a landscape is added the charm of romantic and historic association, the pleasure it awakens is lifted above the region of the purely sensuous into the realm of sentiment and imagination. To the man of religious spirit, to whom the visible universe is but the thought of God made manifest, the mountain gloom and the mountain glory speak first of the majesty and dominion of the Most High; while the smiling landscape, with its suggestion of happy homes and sheltered lives, brings tender thoughts of Him who notes even the sparrow's fall. Among the same scenes the man of science, if he has not sacrificed all the poetry in his nature in the search after material truth, will be lost in wonder that the tumultuous and conflicting forces which have lifted the mountains from the depths of the sea and crowned them with everlasting frost can yet in obedience to the same immutable laws subdue their might to offices of tender grace, can stoop to paint the lily and add perfume to the violet. And so to each the landscape has its mission; to the dilettante it brings a fresh sensation; to the man of feeling a noble emotion; to the man of religion, thoughts of devotion and gratitude; to the man of science, reverent wonder at the mystery and majesty of natural law.

The love of nature, at first an instinct, springs from a deeper source than the admiration of scenery, and it may, when disciplined and chastened, awaken a still more profound delight. The heaven which lies about us in our infancy may be at first only a dim consciousness of the universal life of nature, that life which throbs in every tree and shrub, the instinct in every clod "which comes to a soul in grass and flowers." It may be an inheritance from some far-off age, when man was nearer nature's heart than now, some memory of which haunts the mind of the growing boy and brings much of the unconscious joy of childhood. Most of us know too well how this "vision splendid" fades into the light of common day, but when in some fortunate individual it is retained through manhood, is assimilated by the intellect and shaped by the imagination, it becomes "the vision and the faculty divine," the rare gift of the poets of the race. Every one who retains it as a conscious possession is at heart a poet though he may lack the poet's gift of expression. The lover of natural scenery is wont to talk with eloquence of the pleasure he finds in the contemplation of landscape beauty, but the true lover of nature says little of his joy. He cannot measure or describe it, but when alone in the dense forest or in some sunny glade a mysterious sense of kinship with the silent forces working all about him, or a dim consciousness of a haunting presence, comes to him unbidden and ravishes his soul with suggestions of a more awful beauty some day to be revealed, and after such hours of communion with nature he can return to the noisy world refreshed in spirit and strengthened for the inevitable conflicts of life. It is only the chosen few whose early affection for nature has become a controlling passion who enjoy in full measure this vivifying power.

Since the love of natural scenery may be cultivated, why may not the child's love of nature be preserved? Like other fine instincts, it requires delicate handling. It too often vanishes early, crushed out by hard necessity or crowded out by the insincerities of an artificial life. Nature does her utmost to retain her hold upon the child, the flickering sunbeams tempt him, and every moving shadow has a charm even in his mother's arms. The flowers of the field are his chosen playfellows as he grows; trees whisper to him their secrets; all the myriad sights and sounds of earth and air woo him with their promises of happiness, and while the enchantment lasts the little traveler needs no

other guide through the labyrinth of beauty about him than his eager curiosity. But as this begins to wane would it not be wise to direct his attention a little deeper to the infinite variety of leaf and flower, the endless diversity of form and structure in bird and insect, shell and crystal? As his mind expands why not take him into Nature's workshop to note some of the slow and mysterious processes of growth, the circling of the sap, the perfection of the flower and fruit? Surely some dim wonder at the miracle which binds all the forces of the universe to each tiny germ in fulfilling its destiny, will fill his awakening soul with as deep a delight as that which in his earlier years greeted his keen and eager senses. In this way the study of natural science could begin without its drudgery; the child's powers of observation would increase with their exercise, and the closer investigation of nature about him would keep his interest as fresh as it was when he first began to look and listen. And so as his faculties one after the other are enlisted in the delightful work, he "hearing gains who had but ears, and sight who had but eyes." Is it too much to say that if the original love of nature, which is every child's inheritance, was thus fostered and cultivated, that he would never lose that instinctive delight in the natural world, but that this delight would be slowly transmuted into the possibilities of a deeper and richer joy as maturity was reached?

To speak of gardening as an occupation for children in connection with a subject of such profound philosophy would seem at first to detract from its dignity, but nature has been before us and has implanted in the child the impulse to dig, which awakens almost as early as the desire to catch the sunbeam, and which is quite as vital, perhaps, to its perfect development. It is the law of our growth, that the finer gifts or graces can only be gained on the condition that their acquirement is not the object sought. Thus the child who is set to work in a garden of his own as soon as he has the moderate amount of strength and skill to begin the work, will glean a much richer harvest than the flowers or fruit which will be one reward of his toil. We most love that for which we have made some sacrifice, and, therefore, the growing things upon which the child has spent his tiny strength will be far dearer to him than the finest blooms of his father's greenhouse, while his interest in their relatives of the field and forest will be retained and strengthened by many associations.

This diversion in the garden, therefore, will help to keep fresh and strong the original love of nature which is the child's inheritance, so that he will be more likely to carry it with him into the strenuous work of manhood. So much has been said already in these pages of the influence of gardening upon character, that there is no need of enlarging upon this branch of the subject, but it may be worth while to invite attention to one among the benefits to be derived from early familiarity with the garden and its cultivation, which is rarely, if ever, taken into account. The child will love his garden and be happy in it. When early manhood comes, and during the busier years when he must test his strength in the world of men, his garden, like other pleasures and interests of boyhood, will take a subordinate place, but in the evening of his days, after the stress of his life's work is over, there will inevitably return the longing to possess and transfigure some portion of the earth's surface. This desire comes naturally to almost every man. The idea of rest in declining years seems to be inseparably connected with rural scenes. The paradise to be regained is never within the walls of cities. This is true even of the city-born and city-bred, and it is doubly true of one reared in the country, and when such a one takes up with renewed interest the occupations of his boyhood he finds, to his surprise, that in addition to the flowers or fruit which reward his care there is an ideal harvest of associations which may make his closing years rich with a beauty and a pathos all their own. Every leaf and flower touches some mystic chord of memory and association, and as he rests under the shelter of his Vine and Fig-tree the glory of that far-off time gilds his downward pathway with a tender radiance and revives the spirit of that early day when,

> —meadow, grove and stream,
> The earth and every common sight,
> To him did seem appareled in celestial light.

It appears from the seventeenth annual report of the Board of Park Commissioners of the city of Boston, which has just appeared, that, up to the present time, eight millions of dollars have been expended on the park system—about three millions and a half having been devoted to the purchase of land, four million three hundred thousand dollars to construction, and rather less than two hundred and fifty thousand dollars on maintenance. Considerable progress has been made during the past year in completing the system, although none of the parks are yet finished, with the exception of the Charles Bank, a small marine esplanade on Charles Street, in the city proper. None of the great parkway, which ultimately will stretch from the end of Commonwealth Avenue, passing through the Back Bay Fens, embracing Jamaica Pond, skirting the Arnold Arboretum and Franklin Park, and finally reach the marine park in South Boston, is yet open to the public. This, however, will be the great feature of the system, and will furnish a continuous and interesting drive of about fifteen miles. Boston, in spite of the liberal expenditures which the city has made in the last seventeen years, is still very poorly provided with parks. Franklin Park, of five hundred acres in extent, is the only park in the whole system in the true meaning of the word, and the only one where large masses of people will be able to find rural enjoyment and repose. Serious efforts are now being made to increase the park area in eastern Massachusetts, and it is not improbable that large bodies of unimproved forest-land, like the Middlesex Fells north of the city, and the Blue Hill range south of the city, may be added to the park system of greater Boston, which, if the growth of the last few years is maintained, seems destined to become one of the great centres of human habitation.

The Gardens at Wellesley, Massachusetts.

Among the pleasant excursions to be made in the suburbs of Boston one of the easiest and most agreeable is the trip to Wellesley, where there are many things to see that are of interest to the lover of trees and gardens. The grounds of the college are attractive from their fine natural capabilities, of which the best is unfortunately not being made, and I hope that before long the advice of some expert will be taken with regard to the class-planting of trees, or great confusion will result. It strikes me that if, for the present, each class should celebrate its anniversary by cutting down instead of planting a tree, it would perhaps be of more advantage to the picturesque development of the property.

The situation of the college grounds is delightful. The surface is irregular and well wooded, and there is a beautiful lake to form an attractive feature from whatever point it is observed, but the opportunities for vistas are greatly neglected, and the elevation on which the college stands is dotted all over with meaningless groups of trees, which detract from the dignity of the really imposing site. There is no outlook upon the lake from the balcony of the main building, as tall trees wholly intercept the view. If some of these are necessary for shade, it seems as if it still might be possible to arrange openings through which the lovely sheet of water might be seen, and thus enhance the beauty of the outlook from the handsome hall, which would then command a delightful scene from which it is now at midsummer wholly cut off.

Another thing which struck me as particularly reprehensible, was an ugly straight row of Copper Beeches, planted between the avenue and the woods. This avenue was planted with taste by the original proprietor, Mr. Durant, with Elms, which have attained a good size and now shade it agreeably. Between this row of Elms and the dense woods on the right a fine smooth stretch of grassland had been appropriately left, which produced an excellent effect, but the row of small purple Beeches, apparently of recent introduction, into the very middle of this pleasant level green, is a great mistake and

disfigurement. In the first place, Copper Beeches are trees to be used singly and with the utmost caution. At best, they are a discord in a green landscape, which can only be made endurable by a proper resolution into harmony, and even then the best authorities think we should do better without them, as they represent a doubtful note. One tree of this complexion edging a deep green wood is sometimes pleasing as well as curious, but a stiff row of them, parallel with a row of Elms, is as undesirable a feature as could well be introduced into a landscape-garden.

Some of the memorable trees of Wellesley seem also to be set out in the most unfortunate positions. I was shown a tree planted by Queen Emma, of the Sandwich Islands, which is so near a wood that in two or three years it will be completely overshadowed by the branches of the larger trees, and the class-tree of this year is also put where it will never have a chance to develop properly. It seems to me that the college authorities should take the advice of some competent landscape-gardener as to what needs to be done to preserve the beauty of these grounds. A cultivated and well-trained eye should decide where class-trees can be planted with impunity, and dictate what sorts of trees should be employed for the purpose, and how much space should be left between them, if they are to grow into handsome single specimens, and also where groups can be placed with advantage so as not to interfere with the general effect.

The opportunities here are very great, but it is not desirable to transform these park-like grounds into a meaningless mass of ill-assorted trees, which do not compose well with each other or create a pleasing picture. I recognize all the charm of these academic shades, and realize how dear this lovely spot must be to the hearts of its "sweet girl graduates," but all the more, it seems to me, that its future should not be left to irresponsible planters, but that careful provision should be made to preserve and enhance its beauty. As years roll on some of the older trees will die; these should be succeeded by others. A careful system of forestry should prevail, by which the best of the closely planted trees should be protected, and provision made for proper successors to those which must in time be removed.

Above all, more open space should be preserved, as a wide grassy stretch, with a view of the lake, serves to bring out the groups of trees with good effect, and to increase their value in the composition. A careful study of Mr. H. H. Hunnewell's place, on the opposite side of this sheet of water, shows the worth of knowledge of effect and a settled plan in planting. There the lake is utilized to increase the beauty of the scene, with enchanting results.

From the house there are unobstructed views of its silvery surface, the trees being kept when they do not interfere with a satisfying sight of its broad expanse, which combines delightfully with the smooth lawns, the quaint terraces, or the rustic wildness of certain portions of the beautiful grounds. Relieved against it the stately natural evergreens gain a richer majesty, and it combines with the formal surfaces of the clipped Hemlocks and Beeches and Pines in the topiary garden, in a way that recalls memories of ancient villas of renown upon the lakes of Italy, while, contrasted with its blue, the white pillars of the balustrades seem of Attic value.

Those whom its generous proprietor so freely permits to see these gardens may well be grateful for a chance to know in our own land some of the charm that haunts the classic grounds of the old pleasure-grounds of the Colonna and the Serbelloni. Whether such a sight comports with a New England garden is of little moment. Are not our skies as blue, our hills as softly swelling, our summer suns as hot, as those of Italy? Why not, then, capture this Old World charm, this strange fascination that lingers in a sight of the subduing of nature to art, that suggests the pride of princes who would rule all.

I have sat for hours in the deserted gardens of Rome, where once the haughty old Colonnas trod, and sought to find the secret of the way they move one. Why do these straight terraces of clipped Yew, these formal masses of Ilex and Cypress and Holly, these headless statues, and moss-grown fountains, with their trickling streams and vine-wreathed lions, hold so dear a charm that when one comes in New England upon their semblance he must needs be thankful for this reminder of a never-to-be-forgotten past?

I doubt if it is only the mere strangeness of this formal gardening which so appeals to the untraveled multitude that they regard it with interest and wonder; there is something deeper than that, which, I take it, is the mastery of man over nature, his all-compelling hand that forces the stubborn Pines to do his bidding, the wayward Hemlock to bend to his eccentric will. It is the humanity in it which attracts—which thrills us with an odd satisfaction. This violation of law, this enslavement of wild beauty has a relish for our perverted souls, for is it not our fellow-man who has accomplished this audacity, joined issue with the Creator, defied the eternal forces? Sensation is a complex joy; it cannot always be resolved into its elements, and it is hard to say why, on the shore of a Massachusetts pond, a series of terraces planted with extraordinary pyramids and umbrellas, and broad hedges and columns of foliage, should be as interesting and delightful as they are upon the Lakes of Como and Maggiore, where they are the survival of the fashion of a by-gone day.

Stone staircases lead one down from one level to another; at the base a carriage-drive is separated from the water by one of those white balustrades so familiar in Italy, upon which a peacock ought always to be sitting and pluming his exquisite feathers. Across the water the red walls of the college buildings are picturesquely gleaming through the trees, with little boats moored upon the shore and their feet. Along the edge of the lake winds the carriage-drive, separated from it by a fringe of trees. Strolling on foot along the terraces, even as one does at Isola Bella, of a sudden you find yourself in a rustic garden, stony and wild, where small flowers bloom and Ferns run over the rocks; a winding path leads down a declivity to a pavilion on the edge of the water, where you can sit and look back upon the Italian garden with its strange forms of Pines, clipped to imitate a series of toadstools or umbrellas one above the other, of Junipers personating a pyramid, of Cedars masquerading as gate-posts with round balls atop, of rosy Beeches in square masses as unlike a tree as possible, of a great wall of feathery Hemlocks with a steeple of green at regular intervals along it. For forty years this quaint garden has been planted and maintained for the delight of three generations, and still affords, perhaps, the only specimen of an Italian garden in this country.

The whole of this fine estate of six hundred acres gains interest from the fact that its present proprietor has made it what it is, since 1852, from an uninteresting, flat, sandy arid plain, with nothing upon it originally worth retaining except one large Oak-tree, which has now attained magnificent size. The skill, the patience, the unending labor necessary to evolve all this beauty from such unpromising material, are forever worthy of admiration. Years ago we read the account of the foundation of these gardens in Mr. Henry Winthrop Sargent's supplement to the sixth edition of Mr. Downing's book on landscape-gardening, and were greatly heartened and cheered thereby in our own feeble efforts.

It is hard to realize that even forty years can do so much for a desert, but when, seven years after its beginning, Mr. Sargent wrote his account of it, the place was already noteworthy and interesting. Therefore, who may not take courage to persevere in humble efforts to beautify some barren spot that it may be his fortune to possess? Energy, industry and delight in the work will accomplish wonders, and if any feel discouraged let them come here and look about upon these lofty evergreens in the Pinetum, raised from seed, these stately Oaks and Magnolias and Maples that have grown beneath their planter's eye to their present proud proportions, and then sow his seed, and set out his tree with undaunted faith that he shall live to reap the fruit of his labors and sit beneath the shadow of his plantation while he is yet hale and vigorous.

Not all of us can give to our nurslings the assiduous care and generous treatment that Mr. Hunnewell accords to his, but we may well bestow upon one tree the attention that he has awarded to thousands, and from that one win a proportional satisfaction. Enjoyment, luckily, can be elicited from one acre as well as from a thousand; possibly a concentration of interest upon a limited field may bring in an increased return of satisfaction. So far as my experience goes, the small planter has the same joys and sorrows as the large one; it is merely a difference of scale. In his one Water-lily in a mud-hole, the former may have the same emotions as the latter in a Victoria regia brought to blossom in an elaborate tank with infinite care and pains. The reward, after all, is success in the undertaking, be it great or small. This lesson learned, happiness is within our grasp. Seek the attainable, and no man need be unhappy. If you have room for one Oak, plant your acorn and watch its growth—it is the epitome of a park. Plant your little wood-lot with Pines or Nuts, and cherish the seedlings, you master the lesson of the forest. Work with shrubs if you have no room for trees, with flowers if the space be too limited for shrubs, and from the results achieved will come delight in mastering difficulties, new knowledge, fresh desires, a hearty homely interest in the world about you, a link of sympathy with every son of Adam, who, from the lucky fall of that

idle sinner, has gained a chance to earn his bread by the sweat of his brow.

Hingham, Mass. *M. C. Robbins.*

The Old-time Southern Garden.

ONE of the most characteristic features of the old-time southern home of the better class was the garden. The slovenliness of the farm stopped short at the garden-wall, within which all was care and order. Rows were as straight as rays of light, and walks and borders were neatly kept. This was woman's domain, and the women of the south were careful even to scrupulousness.

No seeds were bought. Such a purchase would have been held an unpardonable extravagance. The few northern seeds sold at the south were used in the town gardens. Every gardener saved her own seed, which, after being carefully selected and dried, were hung well up out of the reach of meddlesome bodies. If any housewife gained a reputation for the excellence of any special vegetable she was pretty sure to be called on to supply half the neighborhood gratis. Among the small slaveholders the manual labor of the garden usually fell on the female house-servants. On the larger farms there was usually a regular gardener. One of the older men, who had been retired from the heavier work of the fields, was usually assigned to the garden, as one was also set to run the mill. If so, he was sure to carry all the superstition of his race into his new calling. The moon was omnipotent in the southern garden. Everything, from the planting of a seed to the cutting of a bean-pole, was regulated by that exacting luminary.

As the system of farming consisted in clearing fresh land as fast as the old was worn out, many farmers used little or no stable-manure in the fields, allowing all of it to go into the garden. Fertilizers were unknown, but droppings from the hen-house answered very well for forcing. The result of this was to make the garden a real oasis amid its too often barren surroundings. The variety of vegetables was not great, but the quality was of the very best. Indeed, even after discounting the enchantment of boyhood, there still seems to have been an excellence in a few of those old-time vegetables which the latter-day varieties have hardly attained, and certainly not surpassed. The originator of new varieties has been more intent on looks than on real merit. This is certainly true of strawberries. I have tried in vain to obtain varieties as fine for the table as those that grew in the old garden away back in the fifties. In every remove from the wild strawberry something seems to be lost in flavor, which no doubt arises from the desire of the propagators to meet the popular demand for large and showy fruit.

Tomatoes had come to be generally grown, though not relished by all to the present extent. Egg-plants I never saw, nor Okra till the seed was needed as a substitute for coffee during the war. Parched and ground, they formed the most popular beverage of those scant times.

In the ante bellum garden the Asparagus-bed, which was an almost sacred spot, responded liberally to the great attention it received. An early cabbage was grown, surpassing in size our present early sorts. Beets were excellent. Only one kind of snap beans was raised, a small green one; and one kind of butter beans, also a small variety. Few persons relished Parsnips or Carrots, though a few were generally grown. Salsify, or vegetable oysters, as it was then always called, was grown and eaten to a much greater extent than it is now.

A flat cymbling, or summer squash, produced on a luxuriant vine, which grew so fast that it was accused jocosely of chasing the frogs out of the garden, was the kind in general use. Pumpkins grown in the low-ground corn-fields were fed almost exclusively to stock. I never saw any cooked, or tasted pumpkin-pie until after the war.

Cucumbers and onions were grown in large quantities and greatly relished by all, being eaten together in vinegar. Vast quantities of cucumber pickles were also consumed. Almost every garden, too, had its Artichoke corner, originally planted by some long-forgotten hand, and now yearly producing enough for pickles without replanting. Irish potatoes were grown in abundance, usually in a "lazy bed," so named from the fact that after planting no further work was required. This bed was a plot in which its potatoes were put about a foot apart each way, lightly covered with earth, and the whole was then covered with leaves and litter to the depth of a foot or more. The yield was enormous, the tubers growing often above ground where the litter gave them full room to expand to the utmost.

Many "lazy beds" afforded potatoes from May till far on into the following winter, the tubers being left in the bed and taken out as needed. This plan might still be followed with profit to the gardener, especially at the south, where it is difficult to induce late-planted potatoes to grow, or to keep the early ones through the summer and autumn, as they soon shrivel and get bitter. As northern-grown potatoes for seed cost us from $1.25 to $1.50 a bushel, many dollars might thus be saved.

One of the most charming features of the old southern garden was its flowers. Except a few along the walk to the front door of the dwelling-house, all the flowers on the place grew in the garden proper. In the typical garden, roses arched the gateway; bushes of tumbling Snow-balls graced the corners; stately Pæonies lorded over the Pinks, and Tulips that bordered the walks; mocking-birds built and sang among the constantly blooming roses, and all the old-fashioned perennial flowers—many of them with quaint local names—were found following each other in their season. Looking backward through thirty years of hazy memories the old garden seems yet a place of ideal attractiveness—the abode of neatness and homely simplicity; the spot in which every member of the household took pride and delight.

Kittrell, N. C. *O. W. Blacknall.*

In the Company of Trees.

IF one wishes to be taken into the intimate confidence of a great tree, and to get the full enjoyment of its strength and beauty, he should lie upon his back on the greensward beneath it, cross his arms under his head by way of pillow, and let the eye climb slowly up the mighty trunk from root to topmost limb. Thus have I lain beneath an ancient White Oak; thus watched the infinitely varied play of light and shade through the dense foliage; thus noted the delicate tracery of the leaves against the blue of the sky, and learned by heart each wrinkle of its rugged bark. This is the way to study the varying characteristics of trees, and to learn many a sylvan secret only revealed to the real lovers of nature, upon whom she has graciously bestowed eyes to see and the heart to feel her beauty and her mystery. I have spent a summer afternoon moving slowly from trunk to trunk, from Oak to Maple, from Maple to Sour Gum, from Gum to Walnut, and then to Ash, to Poplar, and back again to the old White Oak, most satisfying of all.

Sometimes the sun would smile upon me through an opening in the boughs, or a light-hearted vireo warble a lullaby; the orioles whistle plaintively; the friendly squirrels pretend to scold, and scurry away from branch to branch, only to hasten back to peep again and drop a tiny acorn on my cheek. The great white clouds sailing far overhead; a distant hawk leisurely cleaving the air on his strong wings; a few drops from a flying scud—all these become stirring incidents, fraught with healing and refreshment to the heat-worn nerves and weary brain of the house-dweller. Should the eyes close into delicious slumber the great tree stands guard over its puny visitor, filling one with a sense of security and of being cared for as by a mighty and gentle nurse.

Thus has it chanced to me to be overtaken by a summer shower, and to be awakened by the first cool splash of raindrops upon my brow. The Oak had no need of mackintosh and umbrella; it was only necessary to turn the water-proof side of its varnished leaves uppermost, and stand quietly to take whatever came, strong in the security gained by a hundred years of storm and sun. The foliage of the tree protected its sleeping guest as long as possible, but now, with a gentle warning splash, the drops fell more and more quickly; little streams ran down the trunk, following the corrugations in its rough bark; the leaves twinkled merrily as they shed their burden of moisture in my face. Then the sun came out a moment, and the whole tree sparkled joyously like the countenance of a friend who is bringing you welcome news.

Rose Brake, West Va. *Danske Dandridge.*

The Manufacture of Perfumery at Grasse.

A CORRESPONDENT of the *Gardeners' Chronicle* has written an account of an inspection of some of the flower distilleries at Grasse, from which we extract a few of the interesting facts.

"In the production of rose essence from 10,000 to 12,000 kilos of roses are needed to make a kilo (two pounds and a fifth) of the extract, which is worth 2,000 francs, or $400. This is such a costly article that few firms can afford to handle it, and it is usually made only on order given a long time in advance of the time of manufacture in spring. The attar of roses made in Turkey is stronger than that made in Grasse, but not so fine,

perhaps, because the Turks have not such finely perfected machinery as that which is used in the Maritime Alps. Violets and Narcissus are cultivated by tons, only Parma violets being sent to the still, the others not being sufficiently odorous. These pale blue and fragrant violets are grown in the neighborhood, and according to the supply or demand, or according to whether it is a good or bad season, these choicest of modest flowers bring at wholesale from one franc to four francs a pound. Sometimes higher prices are paid.

"The best time to visit Grasse is, of course, in the advanced spring, when the general country is an undulating forest of flowers and the air is filled with a thousand odors. Visitors in the spring-time should be about as much as possible in the evening along the well-kept lanes which cross the flower reserves, for then the perfumes are the most powerful and the best appreciated. Situated on a gentle slope of a spur of the Maritime Alps, the view of Grasse and its vicinity is most picturesque, offering ever-changing prospects as the tourist ascends. On the summit of the hills, above the town, a magnificent view is presented of the numerous manufactories, all surrounded by flower-covered fields, a smiling valley beyond them, and a range of hills closing the view of the sea. When the flowers are harvested for the distillery they are brought into sheds, heaped on long tables, and women, who are so scantily paid that they can barely exist, are set to sort them. Old and young women, little boys and girls, all are at it and earn but a miserable pittance. On following the car-loads of flowers into the distillery, one will at first be pleased with the all-pervading perfume, but getting into the depositing sheds this becomes too much of a good thing. The odor is so rank as to lose its fineness, and it becomes only a strong, almost nauseating, smell, which permeates everything damp, even to the handkerchief within one's pocket."

Plant Notes.

Some Recent Portraits.

THE plants figured in the July issue of the *Botanical Magazine* are of less interest than usual to the gardener, who will see in them botanical rather than horticultural subjects. They are: Synandrospadix vermitoxicus (t. 7242), a stout aroid of Tucuman, an east Andean province, where it inhabits hedges and shrubberies. This plant produces hastate-cordate leaves, and large cymbiform spathes with recurved margins, dirty green on the outer and pale purple on the inner surface, the tubers being described as attaining a weight of four pounds. In its native country it is known as "Cana brabo, the ferocious Cane," because the plant blisters the human flesh. Disa incarnata (t. 7243), a small inconspicuous flowering Orchid of Madagascar, and a member of a genus of which Mr. Bolus, who has paid particular attention to it, remarks that "in the variety of its perianth, it is only excelled, perhaps, by that of Habenaria and Catasetum, and is scarcely equaled by that of any other genus in the vegetable world." To this Sir Joseph Hooker adds, "that, after a careful study of a large proportion of the species of Habenaria, including upward of one hundred Indian, I find their flowers to be morphologically uniform as compared with those of Disa; nor does this remark apply to the perianth only, it extends to the column and its appendages, and even to the pollinia. I quite believe that if Habenaria had been a European genus, it would have given rise to as many genera as Orchis and Habenaria have—that is, about thirty-five instead of the five included in it by Bolus, and upon much more marked structural characters. From such a dismemberment Disa has been saved by its remote geographical position far from the haunts of systematic botanists, and by the sagacity of those orchidologists (Lindley and Bolus) who have devoted themselves to its study." Gynura sarmentosa (t. 7244), a climbing plant of the Senecio tribe of Composite, and a native of the Malayan peninsula and islands. It is described as a very elegant climber, with richly colored stems, branches, and involucres, although from its lax habit of growth not likely to become a horticultural favorite, except in tropical gardens, where space is at its disposal. The small flowers are not attractive, although the habit of the plant, which is said to be the most graceful member of this rather coarse genus, may make it desirable. Masdevallia leontoglossa (t. 7245), a native of the mountains of New Granada, and a small, dirty flowered species. Primula Forbesii (t. 7246), a Chinese species, and one of the only two known Primroses which are strictly annual—that is, that die after first flowering—although they should, perhaps, be more accurately described as monocarpic rather than annual if, as is probable, they form seedling plants the first year and flower and die in the following. P. Forbesii is another of the species lately discovered in the mountain districts of the interior of China, where Delavay, the French Jesuit missionary, discovered it in marshy ground near Tali, in Yunnan. More recently, General Sir H. Collett has found the same plant in great abundance on the hills of the Shan States in eastern Burmah, growing at an elevation of three thousand feet from the sea. P. Forbesii is a delicate species, with small, long-stalked, ovate-cordate, irregularly lobed leaves, and small, long-stemmed, rose-colored flowers arranged in remote whorls.

A charming colored plate of Acacia dealbata gives special interest and distinction to the first number of the forty-second volume of *The Garden*, issued on the 2d of July. This is the Silver Wattle of eastern Australia, and one of the most beautiful trees brought from Australia. It is now a well-known plant in all semi-tropical countries, forming, where the soil suits it, handsome specimens fifty to one hundred feet high, and in spring flowering most abundantly. It is largely grown in southern France, especially in the neighborhood of Cannes, and a considerable industry is founded on the sale of its fragrant flowers, which are shipped to the Paris and London markets in large quantities. In California, too, it has been largely planted, and is one of the best Australian plants which have as yet been tried in that state, although apparently capricious about soil and location. At Cannes, for example, it is perfectly at home, while at Nice, a few miles distant, and in several other towns on the Riviera, it refuses to grow, owing, probably, to the presence of lime in the soil, which is distasteful to many Australian plants. A line a yard wide, it has been said, may be drawn between Nice and Cannes to mark the boundary of the territories in which this tree will and will not grow. In its native country it selects swamps and low ground, where it sometimes attains a height of one hundred and fifty feet.

New or Little-known Plants.

Corylopsis pauciflora.

AN account of some remarkable Japanese plants in Dr. George R. Hall's garden, in Bristol, Rhode Island, appeared three years ago (vol. ii., p. 537) in the columns of this journal. Dr. Hall was probably the first American intelligently interested in plants who lived in Japan, and he was the first to send Japanese plants to this country. He first visited Japan in 1860, and about ten years later began to plant Japanese plants in Bristol. Later he made another voyage to the east, and, returning in 1874, brought with him several plants, including a specimen of Corylopsis pauciflora. This (see our illustration on page 342) has now grown into the largest and most vigorous specimen that has come under our notice. The branches are six feet in height and form a compact mass of thirty-six feet in circumference.

Corylopsis belongs to the Witch Hazel family, and is chiefly valuable for the extreme precocity of the flowers, which appear in this latitude early in April, before the unfolding of the leaves; they are pale yellow and hang in short compact racemes, which quite cover the branches. Although less showy than the Forsythias and some other spring-flowering shrubs, Corylopsis pauciflora deserves a place in the garden, to which in early spring it adds interest and variety.

Cultural Department.

Fruit Notes.

THE Minnewaska Blackberry, I am sorry to say, must be discarded here, owing to its lack of hardiness. It is rather more tender than Kittatinny. Erie is a coarse grower and not hardy, and not certain to yield perfect berries. Agawam has a delicious flavor, and is the best home berry, with Snyder, for market—that is, in climates as cold as that of central New York. After continued experiment, my belief is, it is best to cultivate Blackberries two years, and as soon as the canes come up thickly let them fill the ground. After that I put in neither horse nor hoe. The canes must be topped and the old canes cut out. Unpleasant as handling Blackberry-bushes is, this reduces the disagreeable job to a minimum, and gives me the largest crops.

I am inclined to modify somewhat my previous judgment of the Lucretia Dewberry. I now grow it on trellises of two wires, two feet and four feet high, and lay down the vines for the winter. This practice is almost identical with Grape-culture. They have no canes, but are true vines. The crop is magnificent for size of fruit, quantity and quality. Grown carelessly the plant is useless.

Of all Raspberries I see nothing as yet equal to the Shaffer. It always winter-kills somewhat, but it always gives fine crops of mammoth berries. But the real point is quality. This is the best berry for canning, for cooking, for jellies, for jams. The color is against it with some people. I am growing a large number of seedlings from it.

We are much in need, even yet, of thoroughly good black raspberries as large as the Gregg and absolutely hardy.

In my Strawberry-beds I renew my confidence in Mrs. Cleveland as a berry not to be discarded; also in Lida, in Clara and Pearl, in Saunders, and in Parker Earle. Cumberland is still a standard for all soils and spots. Sharpless is unsurpassed on strong clay soils, but in some sections flavorless. Gypsy is an ideal for quality, but medium in size. Haverland must be retained for size and prolific bearing. Wet weather makes it soft, and it hangs over to the ground too closely. Princess I only get a taste of, but I believe in it. Yale and Williams are promising. The wonders with me are Thompson's 51 for size and length, a veritable lady-finger; a seedling of my own for double flowers, and yet large rich fruit, not prolific; Parker Earle for quantity. Those who do not care to experiment can stick to Haverland, Cumberland, Bubach and Sharpless for large fine fruit.

It is a good time to lay plans for experiments, save seeds of choice things and grow a few rows of seedlings. It may not pay, but Mr. Fay has made over $25,000 as his share of Fay's Currant. You will be sure to get lots of pleasure and character from experiments.

I am in receipt of letters from Japan and from Corea about what are called Japanese Persimmons. Mr. Baird, of Fusan, Corea, says the most northern sorts will probably prove hardy here as far north as Philadelphia. I hope for better than that. Mr. Loomis, of Japan, thinks we can get seedlings that will be hardy as far north as central New York. He has sent seeds to Parsons & Co. for a full test. Dried Japanese Persimmons far surpass figs and dates. At this place I have native Persimmons from seed growing, and absolutely hardy. I have grafted successfully with best sorts grown by the best horticulturists in Virginia and Missouri. The chief trouble is in restraining cions from the south from budding out too soon, as the Persimmon is one of the latest of all trees to start growth in spring.

Fig. 59.—Corylopsis pauciflora, in Dr. Hall's garden, in Bristol, Rhode Island.—See page 341.

I recommend in all culture to use a note-book, and not rely on labels and stakes. These, with all precaution, get displaced; but your book is secure. It can also be referred to in the house at any time. It is only necessary to number your rows, and then write down in columns the names of varieties as planted.

The cost of covering Cherry-trees with mosquito-netting against birds is as follows: For fifteen trees in 1891, about $8.00. The crop was largely used at home, but I sold $30.00 worth. The netting will last two years. The fruit can be kept on the trees all summer.

As an all-around superb red grape for everybody's growing I recommend Gaertner. It is a rapid grower, large grape, large bunch, fine color, first-class flavor and sets admirably. Brighton must be grown with others, to pollenize it; otherwise it would stand at the head of red Grapes. Lindley is another splendid red that fails to take care of itself. Woodruff I still am sorry to condemn as too poor on my ground to be ranked among the best Grapes.

Clinton, N. Y. *E. P. Powell.*

Notes on Shrubs.

IT is probable that very few people, even among those who are botanists, ever see mature fruit of the Leatherwood (Dirca palustris), because, although it is not so very small, it is not conspicuous, being hidden among the light green abundant foliage, and it ripens, falls, and is lost before it might be expected to have attained full growth. In this latitude, and in warm situations, the fruit ripens about the tenth of June. It is about one-third of an inch long, egg-shaped or top-shaped, and two or three are usually produced on the same stalk, which is rarely over half an inch in length, and often much shorter. The outer covering of the fruit can hardly be called fleshy, being leathery and exceedingly thin. At maturity, the fruit is of a pale whitish green color, and is so easily detached from its stalk that it is liable to fall at the slightest touch. After it does fall, or when drying for the herbarium, the outer covering of the seed turns black. If on the ground, the outer covering usually decays and falls away, and exposes the smooth shining brown, and very thin and fragile shells or seed-coverings beneath. The seed of the Leatherwood is usually produced in considerable abundance, and as it germinates very easily any number of plants are readily produced. It does not seem to be known whether or not the seed is ever taken for food by birds or the smaller quadrupeds, but in the Arboretum seedling plants are often found in most unexpected places.

Aside from its foliage and general aspect, the Leatherwood may be known at this season, from all other native shrubs, by its very soft and pliable branches and tough bark, by the base of the leaf-stalk entirely covering and concealing the brown, velvety buds which are to continue the growth next season, and by each annual growth of the branches appearing as if jointed, a characteristic which is given by the conspicuous circular leaf-scar. It will also be noticed that the last leaf or bud does not terminate the shoot at the end of the season's growth, but that there is a little budless tip, or point, which is really the apex. Except for its yellow flowers, which are among the earliest to appear in spring, the Leatherwood is of no great ornamental value from a decorative point of view.

Of all the species in the collection which are broadly included under the genus Prunus the earliest to ripen fruit this season proved to be the pretty flowering P. pendula, which had small, ripe, shining black cherries by the middle of June. They did not all mature at once, more than two weeks passing before all had changed color. The fruit was produced in much greater profusion this season than is usual here. These cherries are too minute to be of any economical value, but what there is of them has a pleasant flavor, a fact which was appreciated by the birds and chipmunks, which greedily carried them off even before they were fairly ripe. The kernel is also pleasant to the taste, which is in striking contrast to the bitter acrid-tasting kernel of our native little wild Red Cherry (P. Pennsylvanica), which is usually left by animals as long as there is an abundance of more palatable food. The wild Red Cherry here begins to ripen about the first week in July. Although these bright red cherries are small, being hardly larger than peas, they are a good deal larger than those of P. pendula. They are attractive in appearance, but the flesh is sour and not agreeable to the taste.

P. tomentosa, which came to us eight or ten years ago as seed, which was collected in the mountains about Pekin, China, gives more promise of becoming a real acquisition among wild fruits of economical value. It has produced cherries during several seasons, but never so abundantly as this, although even this year all the plants did not bear a large crop. Like most other seedlings of fruit-trees, these show much variability in quality of fruit, but on the best plants the fruit is of a pleasant though slightly acid flavor, and is over half an inch in diameter. It is round, of a clear, light red color, and is produced on stalks which are just long enough to attach the fruit to the branch, perhaps an eighth of an inch being about the average length. It is a Cherry which seems capable of much improvement by selection and cultivation, and as it is thoroughly hardy it is quite likely to obtain and keep a place in northern gardens. Professor Budd states that it is quite hardy on the grounds of the Agricultural College at Ames, Iowa. It blossoms so early, however, that although the flowers are always abundant they are so liable to be injured by frost that a good crop of fruit is not always assured. The fruit is sparsely covered with short hairs, which are so slightly noticeable that the edible quality is not affected. The flesh is firm though juicy, and the kernel is sweet and without any bitterness or suggestion of prussic acid. While the first of the cherries were ripe in the last days of June, the crop may be said to have only now (July 12th) reached perfection.

This species is interesting because so different in habit from all other Cherries in common cultivation. It may be likened to a great overgrown Currant-bush more than anything else. A number of stems spring from the root, and they appear to have about reached maturity at seven or eight feet in height, and at this time the bushes have a spread of ten or twelve feet or more. Wherever the branches rest closely upon the ground they form roots freely, and practically become independent plants. This tendency to form roots should render the propagation of any desirable superior form a matter of easy accomplishment either by layers or cuttings instead of by grafting, which in cases like this is to be avoided whenever possible. This little Cherry may prove to be a good stock upon which to graft other Cherries when a good stock is wanted for dwarfing purposes.

P. Grayana, a northern Asiatic species, which the eminent Russian botanist, Maximowicz, named in honor of the late Dr. Gray, has borne a few ripe fruits this season, undoubtedly for the first time in America. It closely resembles the Bird Cherry (P. Padus) of Europe, and has flowers and fruit in long racemes, the fruit being black and smaller than the cherries of our common Choke-cherry (P. Virginiana), and with a much less agreeable flavor—in fact, it might be counted decidedly puckery and disagreeable.

A peculiarity of P. Grayana, as also of P. Padus, is the extreme earliness of the foliage, the plants being covered with well-developed light green leaves, which render them conspicuous before the middle of April and before the leaves of other trees and shrubs have made much headway. The earliness of the foliage may be considered the chief ornamental value of these trees in this country. Unfortunately, also, they appear to be extremely subject to attacks by the black-knot fungus.

Arnold Arboretum. *J. G. Jack.*

Cyclamens and Chinese Primroses.

THE well-known varieties of Cyclamen Persicum and Primula Sinensis are among the most useful dwarf-growing plants for conservatory and house decoration during the winter and spring, since their profusion of flowers is most welcome at that season. Of course, it is now too late to sow seeds of Cyclamen for the coming season's flowers, but about September will be a good time to make such preparation for the following year, for it is far more satisfactory to raise a crop of seedlings each season than to keep over old plants, which will not produce such fine flowers under ordinary cultivation as the young seedlings. The seeds should be fresh, as they lose vitality quite rapidly. The safest method is to sow them in pots or pans of light soil as soon as they are ripe. The pots should be shaded from the sun and placed in a temperature of fifty-five to sixty degrees. As the seedlings appear they should be given plenty of light to induce a sturdy habit, but they should be protected against strong sunshine. As soon as they have two or three leaves they may be transplanted into two-inch pots, light loam being a suitable soil for this purpose, to which may be added some sand or brick-dust to make the mixture more porous. When the young plants are nicely rooted, and before they become badly pot-bound, they should be shifted on into three-inch pots, and from these into four and six inch sizes as they require it. The plants do not like to have the soil very firm about the roots, and therefore light potting should be the rule at all times, and this is one secret of success in their

cultivation. Manure may be used in the compost in reasonable quantities, but should be old and thoroughly rotted. During the summer months Cyclamens can be well grown in a frame outdoors, giving plenty of fresh air at all times, but keeping sash over the plants to protect them from heavy rains and strong sunlight. As soon as the nights become cool, however, the plants will be benefited by bringing them into the greenhouse. Under this treatment strong-blooming plants are produced in fifteen to eighteen months from the seed. As green-fly is a prevalent pest of Cyclamens, fumigating may be necessary occasionally, but otherwise the plants are not specially subject to the attacks of insects.

In the matter of varieties it is probably best to secure some seeds of a good strain from some reliable seedsman for a beginning, and then, by careful selection and crossing, the strain may be still further improved by the grower.

The Chinese Primrose now presents a wonderful variety of forms, as the result of many years' careful selection and fertilization by various specialists, and the colors range from white through the various shades of purple to almost a blue, and from pale pink to scarlet and crimson. The single varieties are readily procured from seeds, while those with double flowers must be perpetuated by means of cuttings and division, and among the latter the double white form should not be forgotten, for it is of neat habit and extremely prolific in flowers, the latter lasting very well when cut.

The Primulas, in general, are a shade-loving class of plants, and P. Sinensis is no exception to the rule, but in regard to soil they are perhaps less exacting than their relatives the Cyclamens, and almost any light, sandy soil will produce fair results. In general treatment a similar plan may be followed to that outlined for Cyclamens, but it should be remembered that the Primulas do not require much water over the foliage, though an abundance at the root when in active growth, and, as the flowering period approaches, some weak liquid-manure will be found beneficial.

Holmesburg, Pa. *W. H. Taplin.*

Perennial Larkspurs.

AFTER a long waiting and vexatious experiences with seed, Delphinium Zalil is now in flower in the garden, where it was planted in the spring of last year. This novelty is one of Dr. Aitchison's discoveries in Afghanistan, and when first described as a lemon-yellow Larkspur hardy-plant lovers were all asking for it, but as it was distributed by means of seeds, and these germinate only when fresh-gathered, many were the disappointments. Our own plants are from fresh seeds kindly sent me by Herr Max Leichtlin in the fall of 1890. These germinated readily, and were wintered over in the greenhouse and set out in spring, where they grew freely for a time, and then disappeared to come up vigorously again and flower this year. I mention this as a recognized authority has described D. Zalil as an annual, which it certainly is not, neither could it be called a biennial, for, supposing that the plant completes its existence after flowering, of which I am not sure, even then it takes more than two seasons' growth to get it strong enough to flower. D. Zalil belongs to a section of Delphiniums which has many representatives in the United States—namely, those that spring from a fleshy root-stock and die down as soon as seed is matured to spring up again the following year. These are not well known in gardens, though some are well worthy of cultivation, such as D. tricorne, which is widely distributed through the southern and western states. D. azureum is another species of which the same may be said. The specific name of D. Zalil is the native name. Since a yellow die is extracted from the roots in Afghanistan, another name, D. sulphureum, was given the plant when first distributed, but D. Zalil has priority, though the synonym describes the color accurately. With us the plants are three feet high, with much-branched flower-stems, while the flowers resemble those of D. cardinale and D. nudicaule in shape. The habit of the plant is slender and the foliage very finely divided; more so than in any other known species. As a garden-plant D. Zalil is insignificant compared with the beautiful double forms of the garden Larkspur, and would be passed by without remark by many, still it is of much interest to those who love for other qualities than mere showiness.

While on the subject of Delphiniums, has any reader had experience with the Larkspur disease, or smut? It attacks the flower-spikes and completely blackens them, in some cases crippling the unopened flowers so that they never develop at all. It is getting to be a question here whether we can have Larkspurs or not. Two years ago there were infected plants in the garden that were purchased, and in this way the disease was introduced. These were all destroyed, and a new lot raised from seed, and this year it is apparent in many plants again, and my experience teaches that next year Larkspurs will be a complete failure here. The old reliable, D. formosum, is as liable to it as any others of garden origin. This smut has much the same effect as that which attacks the Corn, and is probably an allied species. Certainly the disease should be investigated by some mycologist.

D. Cashmirianum is a species that is perfectly hardy and distinct from all others. It has dense panicles of large flowers, but the color is not a pleasing one, being a dull purplish blue. It is not very desirable as a garden-plant except as a single specimen. A short time ago a so-called white form was distributed, and this proves to be of a decided greenish white, and even less attractive than the typical plant.

Too much cannot be said for the Larkspurs of garden origin, especially the double varieties, and it is worth repeating, now that they are in flower, that if the double varieties are marked when in bloom, and seed saved from them, this will produce fully seventy-five per cent. of double-flowered plants. Named varieties are very short-lived, as hardy-plant dealers know, and have to be reimported often from Europe, as they cannot be raised true from seed, and, indeed, seed is but sparingly produced from double flowers, but the seedlings are usually strong enough and able to withstand the climate here where the parents fail. Larkspurs are gross feeders, and need a rich soil that never dries out, and therefore the heavier the soil the better. In a damp position they will grow six to eight feet high, with long spikes of flowers, which may be cut as soon as they fade, and another crop of flowers will come on later. Seedlings flower the first year, but do not attain full strength until the second season.

A word should, perhaps, be added with regard to D. Przewalskyanum, now in flower for the first time here. It was sent out a year ago, and grew vigorously last summer and wintered out well, and is now about four feet high, with spikes of pale creamy white flowers that are small, and in no way attractive from a garden point of view. The foliage is ornamental, being prettily cut, of a deep green, spotted with a paler green. It is of Asiatic origin, and, like a species from Yunnan grown last year, without name, is rather disappointing.

South Lancaster, Mass. *E. O. Orpet.*

[We have received specimens of the diseased Delphiniums, and the trouble seems to come from a mite and not from a fungus. Professor Halsted thinks that if the affected plants are wet with cold water the increase of the mite will be checked.—Ed.]

Melianthus major.—This is a half-hardy greenhouse shrub which seldom fails to attract attention. Glaucous-leaved plants seem to possess attractions for most persons, but when the foliage is beautifully cut, as in this plant, it possesses a double beauty. There is no plant in the garden of which the name is so frequently asked as this, from which I presume that it is not often grown, though it was introduced many years ago. It is useful, not only as a specimen plant in the greenhouse, but also in the open, in sub-tropical borders, where its peculiar distinctness proves very attractive. It forms a plant some four feet high, with smooth, hollow stems, leaves stem-clasping and acutely cut.

Jatropha podagrica.—A New Granada plant which seems to be better entitled to the common name of Coral-plant than the Erythrina, as its inflorescence bears a striking similitude to a bunch of red coral. In all respects, this plant is a curiosity of vegetation. It is euphorbiaceous and requires the cultivation usually given to that family. It grows readily from seed, and forms smooth, erect, club-like stems, quite rounded at the apex, from which spring large, smooth peltate-cordate leaves. The plant becomes dormant late in the year, and as the new leaves commence to move there is thrown up from the apex of the gouty stems a long scape topped with an irregular raceme of orange-red flowers, arranged as a spray of coral. This inflorescence continues about a month.

Geranium Henry Cox.—Some few years ago, when visiting Mr. John Thorpe's place, I happened to meet an intelligent gentleman who was devoted to fine Pelargoniums in general, and this variety in particular. Having become interested in his experience, I took pains to secure a plant of the variety, which proves a most interesting one with beautiful leaves, when properly grown. It belongs to the golden tricolor section, and is properly a greenhouse-plant, being a very weak grower, very dwarf and slow to increase. It seems to need

very careful cultivation, and should be kept in warmth near the glass. In such conditions it puts forth very high-colored leaves, with veins of yellow, scarlet, green and cream of the most vivid tints. The stems of the plant are white, and a well-grown specimen is a charming thing, besides being a credit to a very skillful cultivator.

Linaria cymbalaria.—The Kenilworth Ivy is not usually known as a hardy plant, but, like many others, if grown outside under proper conditions, it will live through an ordinary winter. The conditions seem to be that it shall have a sheltered place entirely free from wet. Some plants under an overhanging south wall lived over last winter, and I have several times seen this fact noted by others. If any one had an old wall to furnish with plants it would be well to try this, as it is easily established in summer, and probably if the plants were killed in a severe winter there would be seeds scattered in the recesses which would rapidly germinate and keep up the stock.

Berteroa mutabilis (Alyssum mutabile) is an herbaceous perennial introduced by Thorburn & Co. last year, which is just now in flower. It proves to be perfectly hardy, and forms low spreading plants one and a half feet high, many-branched, and furnished sparsely with white Alyssum-like flowers. The foliage is dull and not especially attractive, and from scarcity of flowers the plants have a weedy look, and do not seem a desirable addition to the garden.

Ipomœa Bronsoni, another introduction of Messrs. Thorburn & Co. of last season, is said to be a Cuban Ipomœa, and is a most wonderfully rapid-growing vine. A strong plant last season covered a great number of square feet of space, and it is doubtful if there is in cultivation an annual vine which makes more rapid growth. The plants are white-stemmed and gouty at the base, but the season was not long enough for the production of flowers. This is probably of little disadvantage where such a plant would be most useful, as most of the quick-growing vines are apt to produce seeds which stock the garden with plants to be weeded out.

Elizabeth, N. J. *J. N. G.*

The Forest.

Our Land Office System.

A FEW weeks ago we quoted part of an interesting chapter on the Forests of Minnesota, which had been prepared by Mr. H. B. Ayres for the Nineteenth Annual Report of the Geological Survey of that state. In the same chapter Mr. Ayres makes some excellent observations on our Land Office System, which we reproduce below:

While the giving of from 300,000 to 4,000,000 feet of standing Pine to a poor pioneer seems a paternal act on the part of the Government, the actual result is putting nearly all the value of the timber into the pocket of the lumberman, to whose plant the tract may be tributary.

The settler, even when honest, can, as a rule, afford to live on a Pine claim merely long enough to comply with the homestead or preemption law, and when he sells his Pine, often gives title to the land also, when it starts upon the routine by which it is, eventually, advertised for taxes, non-productive, idle, worthless.

If we continue, as we have done, the 17,000 men now employed in reaping the great natural harvest will soon leave the country, as they have left the older lumber states; for the lumberman, under the present system of disposing of public lands, cannot think of waiting for a second growth, while he can acquire new forests of standing Pine at a nominal figure. His only sensible course, as far as his own interests are concerned, is to strip off the lumber and abandon the land.

The time to decide upon the use to which timbered lands should be put is, undoubtedly, before they pass into the hands of individuals. They should be examined, and the question decided, whether they should be thrown open for settlement as farm-lands, or whether it would be best for the general welfare to have them kept in timber.

There are still in the state some 6,000,000 acres of more or less wooded land belonging to the Federal Government. To one looking the situation fairly in the face, would it not seem best to have all this area withheld from settlement until the soil be examined, and its adaptability determined?

The direct profits that may be expected from forestry are not large after the virgin timber has been cut. In Europe, seldom over 5 per cent. is realized, and the American lumberman cannot be expected to act contrary to his notable common sense and shrewdness and stay and do a business that brings in 5 per cent., while he may by entering a new field, under the present land office system, get from 10 to 200 per cent. Only in exceptional cases, most favorable to growth and convenience to market, is forestry profitable to the individual. To a corporation of woodworkers the profits may be greater, but it is only the state or the General Government that will be able to reap all those other benefits, such as permanency of industries, support of greatest population, etc., which, added to the direct profits possible to the individual, would bring the sum of gains well within the percentage of fair business profits.

Forest-lands should, therefore, as a rule, be managed by the state or by the Federal Government.

In Minnesota, the federal lands now vacant, and more or less wooded, amount to some		6,000,000 acres.
The state lands	600,000	
The university lands	470,000	
The school lands	231,000	
		1,301,000
Total public forest-lands . . .		7,301,000 acres.

The question as to what would be the best management of these lands has been studied, and studied faithfully, by many, if not by all the men upon whom their care devolved, and, no doubt, they have found the difficulties that they, single-handed, were unable to overcome. It is necessary that all the people be so well informed that they may, at least, be able to appreciate the efforts their chosen representatives in the local, state or Federal Government may make in their behalf; and while it is the plain duty of these representatives to study all the questions bearing upon the welfare of their constituent regions, these questions are so numerous that they cannot be expected to master them all, unless those who have made special study aid them by digests of their work.

Correspondence.

Plant Diseases in West Virginia.

To the Editor of GARDEN AND FOREST:

Sir,—In the southern portion of this state, especially in Mercer County, this season, the indigenous Juniper, and particularly those in yards, have much the appearance of fruiting Orange-trees, so thickly are they dotted with the large cedar-apple (Gymnosporangium macropus) in its fruiting stage. The orchards of this district plainly show the predominance of this fungus by the prevalence of the second stage (Roestelia pyrata) on the leaves of the apple. The farmers questioned state that the disease has been noticed particularly upon the Juniper-trees during the last three years. Previous to my visit, no attempt whatever had been made to cut out the cedar-apples and burn them.

The leaves of the wild Blackberries, especially those of pasture and meadow lands, are being destroyed in all sections of the state by the Uredo, Cæoma luminatum, which is so common this season that I have yet to see a field in which the briers were not more or less affected by this fungus, while many present the appearance of being covered with an orange fabric. In this state, where these briers are considered one of the worst of our weeds, the benefit of such widespread affection can be readily realized.

I have been watching with considerable interest for the appearance of Puccinia suaveolens among our few stations of Canada Thistles, but have so far failed to notice it. Once only have I found the disease, and then on the Boar Thistle (Cnicus lanceolatus); even this was so far from any known patch of Canada Thistles that I was unable to transfer the spores, much as I desired to do so. I feel confident that this would be the only true measure of eradication to practice effectively against this Thistle. I was glad to be able to prove last season that the seeds produced by Canada Thistles in this state were incapable of germination, owing to improper fertilization of the ovaries. There remains, therefore, only the root-spreading for our farmers to contend with.

In the Pine-forests of the Alleghany region great damage is being done by a beetle (Dendroctonus frontalis), which girdles the inner bark, thus cutting off the flow of sap. Hundreds of trees are perishing through the destructive action of this insect. In searching for some method of checking its ravages, our entomologist, Mr. A. D. Hopkins, found large numbers of the larvæ of this beetle dead and covered with a new fungus disease which Professor Peck has named Cylindrocalla

Dendroctoni. Detecting no other cause for the death of these larvæ, and deciding that the Cylindrocalla must be the agent, we have inaugurated a series of experiments to decide the question, and, if possible, to enable us to cultivate and transmit the disease. Trees affected and unaffected by the beetle in question were found to be very prominently the host of Lophiodermium Pinastri, Coleosporium Senecionis, and Hyphoderma Dezmanzieri, but we consider none of these forms to be particularly devitalizing to the affected trees.

The Laurels are greatly affected this season by the common leaf-spot (Septoria Kalmiaecola); and the leaves of Rhododendron maximum in the dense forests of the Alleghanies are being badly deformed and the shrubs injured by great quantities of Exobasidium Rhododendri. We believe this to be the first report of the presence of this European species in the United States. Our Peach-trees in many localities are showing this season disastrous inroads of the Yellows, and in spite of our efforts among the farmers of the state the Black Knot of the Plum and Cherry is advancing.

Our state began botanically terra incognita, our work is becoming fruitful of new forms and exceedingly interesting in general. Many of our wild plants, economic and otherwise, are affected this year by different parasitic species of fungi, and our orchards and crops are in nowise exempt from their almost discouraging attacks.

Agr. Exp. Station. *Charles Frederick Millspaugh.*

How Cold Air Settles in Hollows.

To the Editor of Garden and Forest:

Sir,—An extreme instance of the often-observed fact that cold air settles in hollows, will bear repetition, although it occurred as long ago as the winter of 1874–75, and the facts were made public. At the time, in the Traverse Bay region, Michigan, there was considerable interest manifested by fruit-growers in the subject of the proper location for orchards, and the highest elevations were considered the safest.

Mr. Isaac Garthe, living near Northport, Leelenaw County, arising before daylight on the 10th of January, 1875, was surprised to find his thermometer indicating thirty-six degrees below zero. He at once started for the house of his next neighbor, Mr. Theodore Parmelee, whose house is 150 or 200 feet higher, and on the way noticed the steady rise in temperature, which at his destination was up to sixteen degrees. After some minutes of conversation he returned home, and when he got there, still before daylight, the thermometer had fallen back to thirty-six degrees.

Mr. Garthe's house was in a hollow surrounded by hills, and it is hardly necessary to mention that the air was still. As sixteen degrees is about an extreme temperature for that region, this great difference of twenty degrees is rather noteworthy.

Milwaukee, Wis. *C. L. Mann.*

The Rose Hill Nurseries.

To the Editor of Garden and Forest:

Sir,—This establishment is located at New Rochelle, New York, and has a wide fame for fine plants which have long been specialties here. Messrs. Siebrecht & Wadley have a reputation in New York City and Newport as leading florists and decorators, and also for their enterprise and activity in giving many flower-shows both in the Eden Musée and Madison Square Garden. The nurseries are probably the natural result of a long-continued successful city business with its demand for high-class flowers and plants, but there has been a branching out in other lines, so that an extensive list of plants is now grown here. A study of their beautifully printed and comprehensive catalogue led me the other day to New Rochelle, a section of Westchester County, where all the available lands seem to be undergoing a rapid transformation into syndicated parks. To the Rose Hill Nurseries is a short drive over a pleasant road, along which, on a quiet bit of road-side, I was surprised to find a rather imposing marble monument to Thomas Paine. How many people in this city know that the author of "The Rights of Man" has been honored in this way?

The entrance to the nursery is at present an excellent example of bold and careful planting. A long curving line of shrubs, hardy perennials, Retinosporas and other conifers, and bold grasses, backed by a Privet-hedge, shut out of view the main plantations, while groups and lines of bold plants at the left mask the base of Mr. H. Siebrecht's residence and partly hide the buildings in the rear. A noble group of Rhododendrons, at the extreme left, break the continuity of the screen. A border of this character, not overcrowded, is always interesting, and not nearly so expensive to maintain as a border of ordinary bedding plants. Hardy plants are largely grown, several acres being devoted to their cultivation. I noticed not only a large selection of the popular hardy perennial plants, but also many gems in the way of terrestrial Orchids. There were also plantations of young Roses, others of Rhododendrons, Azaleas, Lilacs for forcing, while, as anti-climaxes, there were tanks of aquatics and borders of Cacti.

While the exigencies of nurseries require that they shall be located where land is comparatively cheap and the air is pure, it will usually be noticed that the florist generally locates in pleasant quarters where there is a good outlook. The Rose Hill Nurseries make no exception to this rule. The extensive ranges of houses occupy the ridge of a low hill from which there is a pleasant view over the surrounding country. In these ranges, mostly practical working houses, was found an extensive stock of plants. Messrs. Siebrecht & Wadley are large operators in Palms, which in these days are in such rapidly increasing demand for house decoration. Not only are Palms grown largely on the premises, but a branch nursery is maintained at Dabadie, Trinidad, West Indies, to which young plants are sent to be grown in the open to salable sizes. The traffic back and forth of Palms, Crotons, Marantas and various large-growing tropical plants is sufficiently extensive to enable Messrs. Siebrecht & Wadley to permanently engage a special compartment in the regular steamers for this purpose. The demand for Palms is evidently unending, for, not considering the Trinidad stock, here were to be seen Palms not only in special houses, but also in all available spaces, while extensive ranges of high frames were filled with small potted Palms, plunged in spent tan and kept close in the process of forcing. Among the showiest plants in the Palm-houses were some large specimen Crotons from Trinidad, in which climate they form small trees of brilliant foliage. Orchids are also a great specialty, a very extensive variety being grown. While numerous rare plants are often in stock, very large numbers of the useful Orchids are grown for cut flowers, it being necessary in the retail business to have always at command a constant supply. The flowers seem to be kept cut rather closely, only a few flowers of Cattleya Gigas being open during my visit. A rather novel sight was one house the entire half of which was occupied by a bed of Odontoglossum crispum planted out. These were on a sloping bed with a slatted bottom. Under this a bench was filled with clinkers to retain moisture. A Rose-house or two, one of Chrysanthemums and several of select Ferns were interesting.

The demand for Tuberous Begonias has found Messrs. Siebrecht & Wadley prepared with a strain in which they take great pride. The plants in flower in one of the houses were single and double, and excellent examples of this favorite flower. In the same house were some Gloxinias of an excellent upright flowering habit and most glowing colors, evidently a first-rate strain. Aside from these, the most brilliant mass of color in the houses was a collection of fancy Caladiums, which at this season are in their glory.

Such establishments as the Rose Hill Nurseries prove the existence of more active purchasers of good plants than we are apt to think are among us, but it would seem to require an exhibition building to house some dormant Tree Ferns some fifteen and eighteen feet high, a number of which I noticed as just arriving.

Mr. Siebrecht is ably seconded in the management by his two sons, and it is a pleasure to note the air of prosperity and organization evidently prevailing at Rose Hill.

New York. *G.*

Recent Publications.

The Silva of North America: A Description of the Trees which grow naturally in North America, exclusive of Mexico. By Charles Sprague Sargent. Illustrated with figures and analyses drawn from nature by Charles Edward Faxon, and engraved by Philibert and Eugène Picart. Vol. IV. Rosaceæ-Saxifragaceæ. Large quarto; pages 141; plates fifty. Houghton, Mifflin & Co., Boston and New York.

The fourth volume of this great work upon the trees of North America sustains the noble character of the preceding volumes, and adds another monument to the literature of American descriptive botany. The present volume will undoubtedly prove to be the most important of the series in a horticultural sense, for it discusses the Rose family, being largely occupied with the native Plums, Cherries, Apples and Hawthorns. The only other volumes which can approach it in horticultural importance are the forthcoming one devoted to the conifers and the one already published which describes

the Magnolias. Of the forty-one species described in Vol. IV. thirty-two are already in cultivation for fruit or ornament, and all the remaining nine are worthy of introduction. The volume also possesses unusual interest for botanists from the fact that it illustrates so many species bearing fleshy fruits, parts which are not preserved in the ordinary herbarium.

The greater number of the species fall into three genera—Prunus, with fourteen species; Cratægus, with the same number, and Pyrus, with five species. Other genera are Chrysobalanus (the Cocoa Plum), Vanquelinia, Cercocarpus, Heteromeles, Amelanchier and the single arborescent saxifrageaceous genus Lyonothamnus.

The most striking feature of this fourth volume is the portrayal of the native Plums, which have never before been so well presented, and which are now attracting great attention as the sources of a new class of fruits. Five species are now recognized in the eastern states where a few years ago there were but two. Four of these are the parents of important cultivated varieties, and all of them possess merits as ornamental plants. The one species whose fruit has not yet been ameliorated is Prunus Alleghaniensis, a slender small tree, which "is not known to grow spontaneously outside of a small elevated region in central Pennsylvania." This species was first described by Professor T. C. Porter in 1877. It is not known to cultivation except in a few collections connected with public institutions. As grown at Ithaca, New York, it is very showy when in bloom, and its foliage is attractive; and Professor Sargent says that the fruit is collected in large quantities in its native localities for making jellies, jams and preserves. We shall hope to soon see it generally distributed in the gardens.

The remaining north-eastern Plums are Prunus nigra, P. Americana, P. hortulana and P. angustifolia. P. nigra, the Red or Canada Plum, has not been recognized in our modern books, although it was described something like a century ago. Professor Sargent uses the name to designate a large-fruited, flat-stoned Plum, with glandular-serrate calyx lobes and glandular leaf-stalks, which ranges through the St. Lawrence valley, and westward to the Assiniboine region. Its flowers are earlier and larger than those of P. Americana, with which it has been formerly united; and it is thought to have been commoner in cultivation in former years than the other species. It is now said to be naturalized about houses and highways in some of the northernmost eastern states. To this species, Professor Sargent would refer the Purple Yosemite, Quaker and Weaver Plums. The separation of P. nigra from the older species, P. Americana, will excite a closer study of our northern wild Plums, although there may still be some doubt as to its true specific position. The separation of this species takes the true P. Americana from Canadian territory, and makes its northernmost limit, in the east, central New York and northern New Jersey. It ranges westward to Montana and Colorado, and southward to Florida and Mexico. The orchard varieties known as De Soto, Itaska, Forest Garden, Louise, Minnetonka, Cheney, Deep Creek and Kickapoo are referred to this species; and so are Forest Rose and Miner, but this is evidently an inadvertence, as they are also referred to P. hortulana, to which they probably belong.

The greatest innovation among the Plums is the recognition of a newly described species, P. hortulana, standing between P. Americana and the true Chickasaws. This species grows wild in the Mississippi valley, from northern Illinois to Tennessee and Arkansas, ranging southwestward through Texas. It is a smooth-growing, mostly upright, small tree, with ovate-lanceolate, mostly shining, closely serrate leaves, and reddish or yellow fruit, and a small roughish clinging stone. Horticulturally, it is probably the most important of the wild Plums, having given to cultivation the Wild Goose, Wayland and Miner, the three best-known native varieties; it is also considered to be the parent of Cumberland, Indian Chief, Garfield, Sucker City (evidently an error for Sucker State), Missouri Apricot, Indiana Red, Golden Beauty, Forest Rose and Parsons. It also appears to hybridize with the Peach, as in the so-called Blackman Plum, but these hybrids are sterile. The fruit, as represented in the plate, is rather undersized, and it lacks a peculiar dotted character which is common to most, if not all, the forms of this species.

The Chickasaw Plum, for which Marshall's name, P. angustifolia, is now used, is considered to have given to our orchards such varieties as Pottawattamie, Jennie Lucas, Early Red, Caddo Chief, Transparent and Colleta. It is essentially southern in its range, although it occurs as far north as Delaware and Kentucky. It is thought that this Plum has been introduced into the eastern states, if not into the United States as a whole; but this point, probably, needs close investigation. A peculiar character of the fresh fruit of this species is the dotted surface, a feature which does not appear in the plate.

Among the Cherries, botanists will miss Prunus demissa of the west, which Professor Sargent considers inseparable from the Choke Cherry (P. Virginiana).

In wild Apples, the reader will find a variety (Iœnsis) of the common Crab (Pyrus coronaria). This variety, which has been thought to deserve specific rank, is the common Crab of the Mississippi Valley. One of its distinguishing characters is the short and thick fruit-stem, as compared with P. coronaria proper, and which is not well indicated in the plate. P. angustifolia and P. rivularis are figured and described, as are also the two Mountain Ashes (P. Americana and P. sambucifolia).

Next to the Plums, the Hawthorns are the most striking feature of the volume. The magnificent plates will greatly aid in elucidating one of the most confused genera in our flora. Fourteen species are recognized, but there are few changes in nomenclature. Cratægus uniflora, of Muenchausen, replaces the familiar C. parvifolia of our manuals; C. coccinea, var. mollis, is erected to specific rank under the name of C. mollis; C. rivularis, of Nuttall, becomes a variety of C. Douglasii; C. berberifolia is a variety of C. Crus-Galli; and C. elliptica is reduced to a variety of C. flava. It is to be hoped that these plates will direct attention anew to the value of our native Thorns as ornamental plants. The plates are all so excellent that it is impossible to select any one of them for particular comment, but every botanist must at once appreciate the aid which the illustration of C. punctata will render in elucidating a handsome species which has been too long overlooked or neglected.

The Juneberry, or Service-berry, which is now coming into cultivation, appears as Amelanchier Canadensis, var. obovalis, instead of as var. oblongifolia, as heretofore. Another variety of A. Canadensis is recognized in var. spicata, which is the A. ovalis of botanists (but not of recent horticulturists). This variety is characterized by "broader obovate, sometimes suborbicular, leaves," and "is common in the northern states." The western Service-berry is kept distinct from the eastern species as A. alnifolia.

Aside from the inestimable value of the running text and the plates, the foot-notes abound in historical matter, and those concerning the cultivated Plums, Cherries, Apricots, Peaches and Apples are among the best concise statements concerning the origins and botanical features of these fruits which have been published.

This volume of the Silva is appropriately dedicated "to Horatio Hollis Hunnewell, a true lover of trees and a wise and generous patron of the arts and sciences."

Cornell University. *L. H. Bailey.*

Notes.

One hundred and twenty years ago the ground upon which stands the Lutheran church at Mannheim, Pennsylvania, was donated to the congregation by Baron Henry William Seigel, who had founded the town, upon consideration of the annual payment of one red rose. This pretty rent was twice demanded and paid before the death of the baron.

Our native Spiked Loosestrife (Lythrum Salicaria) is a most effective plant for the borders of artificial water or in damp places, where its purple-lilac flowers, borne on spikes from four to six feet high, show well against masses of foliage. It is one of those sturdy plants which will take care of themselves when once established, and it has the advantage of keeping in flower for a long time.

Americans are often called an unsentimental people, but, in fact, their sentimentality constantly reveals itself in ways which must seem surprising to foreigners. For example, not content with making a simple exhibit of their famous Blue-grass at the Chicago Exhibition, the Kentucky committee proposes to collect the sods from historic spots, as from the home of Henry Clay, the birthplace of Lincoln, and the battle-field of Perryville.

The Edelweiss, one of the most beautiful and quaint of mountain flowers, is doomed to extinction, says the *Cornhill Magazine*, because tourists in Switzerland consider themselves bound by fashion to wear a couple of dried specimens in their hats and send them home gummed to a card. We are glad that the government in one or two of the cantons has interfered to save the persecuted plant, and has made it a finable offense to pluck its flowers.

In Japan, writes Mr. Lafcadio Hearn, "stones are valued for their beauty, and large stones, selected for their shape, may have an æsthetic worth of hundreds of dollars. And

large stones form the skeleton or frame-work in the design of old Japanese gardens. Not only is every stone chosen with a view to its particular expressiveness of form, but every stone in the garden or about the premises has its separate and individual name, indicating its purpose or its decorative duty."

The weekly exhibition at Horticultural Hall, in Boston, on Saturday, was not large, but the fruits and vegetables displayed were unusually fine. The spikes of double Hollyhocks shown by J. S. Fay and N. T. Kidder were of the best quality, and some of the newer Sweet Peas were very interesting, on account of their delicate colors. The herbaceous plants sent by Rea Brothers and the wild flowers collected by Mrs. P. D. Richards added much to the interest of the exhibition.

Some of the Bush Honeysuckles make a beautiful display at this season with their bright-colored fruit. The old Tartarean Honeysuckle is one of the very best of shrubs for the north, as it will endure the severest winters. It has an admirable habit, flowers abundantly, and its different varieties bear crimson or yellow berries, which have now ripened to their richest coloring. Lonicera Morowii, from Japan, is fairly loaded with bright red fruit clustered among leaves of light green, while the branches of L. Ruprechtiana bend under the weight of its berries of the same color, although covered with a slight bloom. This last shrub comes from Manchuria. The beautiful fruit of all these Honeysuckles, coming at a season when flowers in the shrubbery are rare, gives them especial value.

The preference which English buyers show for foreign-grown apples is not very encouraging for this industry in England. The growers wish to have their apples protected by imposing an import duty upon the foreign-grown product. One journal answers this by saying that it would be hard to force housekeepers to make their puddings with apples which are high-priced but of inferior quality. At a recent banquet of the British Fruit Growers the proposition was made that all apples exposed for sale be marked "Foreign" or "English." This proposition was enthusiastically received. In this manner English protectionists will not be obliged to buy apples which have the misfortune of having been grown under a foreign sun. In spite of English opposition to foreign-grown fruit the papers continue to announce the arrival of successive shipments, all of which sell rapidly. It is estimated that about 240,000 bushels arrived during the spring months, all coming from Tasmania. Six weeks are required for transportation.

In his description of a trip down the Danube, Mr. Frank Millet says, in the July number of *Harper's Magazine*, that at Hirsova, near the Russo-Bulgarian frontier, the river "divides into a number of branches which enclose and intersect with sinuous windings a great irregular marsh twelve or fifteen miles in width. The shortest of the sluggish branches of the river skirts the eastern limits of the Roumanian plain, and paddling into this narrow channel we found ourselves in a short half-hour in a region quite unlike any we had yet seen. Both banks are low and covered with tall Reeds alternating with Willow-patches. The only habitations are little fishing-stations, and these are miles apart. The fishermen's dwellings are hovels of the rudest kind, built of mud, thatched with reeds, and surrounded by fences of the same material. The botanist whose duty it was to gather drift-wood brought back from his rambles a great bouquet of wild flowers—Melilot, Loosestrife, Convolvulus, Blue Veronica, Chicory, Tamarisk, Snapdragon and many others."

A correspondent, in speaking of our commendation of the Prairie Rose (Rosa setigera), writes that he has examined all the nursery catalogues he can find, and no one seems to have this plant on sale. We see no reason why this plant, which is one of the handsomest of all single Roses, should be neglected by commercial growers, especially since it has the advantage of flowering as late as almost any other single-flowered Rose except the R. foliolosa from Texas. We recently saw it in a southern city trained over the veranda of a cottage, where it made a more beautiful display than any of the double-flowered Roses growing on the neighboring houses. This is one good way to use the Prairie Rose, although it probably looks best when planted at the top of a bank and is allowed to send down its long, vigorous and graceful shoots irregularly to the bottom. It is a good subject to plant as a single specimen on the margin of a lawn. If it is set in good soil and with sufficient room its arching stems will form a mass of foliage ten or twelve feet in diameter. It has been in bloom now for three weeks, and its large clusters of pink flowers show admirably against the pale blue-green foliage.

Mr. James MacPherson writes to *The Country Gentleman* of some fine trees at the old Moon Nursery, at Morrisville, Pennsylvania, which was established about fifty years ago. A Pin Oak, which was planted some forty years ago by the father of the present Mr. Samuel Moon, now girths eight feet and ten inches four feet from the ground. A Bur Oak at the same height, and thirty years old, has a circumference of seven feet, and the Willow Oaks show as strong a growth. A Purple Beech, thirty-five years old, girths eight feet and nine inches three feet above the ground, and another specimen, only twenty-five years old, is forty feet high and six feet in girth. The Japanese Red Bud seems to have reached its maximum development here, one specimen being fourteen feet high and twenty-one feet in diameter, while Exochorda grandiflora is about the same size. These figures show that it ought not to be a discouraging thing to plant trees, and, as Mr. MacPherson well remarks, a young man who begins to plant when he gets married may have trees to be proud of before his children leave him.

The Sierra Club, recently incorporated in San Francisco, is a corporation formed to explore, enjoy and render accessible the mountain-regions of the Pacific coast; to publish authentic information concerning them; to enlist the support and co-operation of the people and the Government in preserving the forests and other natural features of the Sierra Nevada Mountains; to take, acquire, purchase, hold, sell and convey real and personal property, and to mortgage or pledge the same for the purpose of securing any indebtedness which the corporation may incur; to make contracts and transact other business pertaining to the corporation and the management of its property. John Muir is President, and Warren Olney is the First Vice-President of the club. Applications for membership may be addressed to the Secretary, William D. Armes, University of California, Berkeley, California, the admission fee being $5.00, while the annual dues, except for undergraduates of colleges and members residing beyond certain counties in the neighborhood of San Francisco (which is placed at $1.00), is $5.00.

In an article entitled "Pestiferous Plants," in the *Popular Science Monthly*, Professor B. D. Halsted says: "The fact is patent that weeds are everywhere present, and the best means ought to be taken to resist their greater prevalence. In this warfare against them there is no weapon equal to a thorough knowledge of the enemy—that is, an understanding of their nature, their appearance in all stages of growth, their methods of propagation and dissemination of the seeds. This knowledge is much more highly appreciated in Europe than here. In Germany, for example, they have wall-maps upon which the leading weeds are represented. Hung as these are upon the school-room walls, a child, simply from daily seeing these life-like colored drawings of the various pests, will learn their appearance and names. Some such method of instruction is needed in this country, by which the children who are soon to be our farmers and gardeners may become familiar with the troublesome weeds even in advance of their advent, that the proper means may be taken at once for meeting and destroying them. Editors of agricultural papers and professors in agricultural colleges yearly receive many letters asking for the simplest kind of information concerning many common weeds, thus showing the general lack of knowledge upon this important subject. To put a map of a dozen of the most destructive weeds upon the walls of every country school-house in the United States is a great undertaking; but, if it were done, the next and succeeding generations of farmers would be the better able to carry on the work of extermination. There are a large number of farmers' clubs throughout the country, and a great deal might be done by hanging a weed-chart upon the walls of these halls, where farmers gather from time to time for mutual improvement and a better understanding of the ways and means of a more profitable agriculture. Weeds have been neglected in more ways than one, and just so far as they are overlooked and left to themselves the greater will be the curse. As we look over the premium-lists of our thousands of county and state fairs we seldom see a prize offered for the best collection of weeds. It seems incompatible with our fitness of things to have a good collection of anything that is bad; and yet the fact remains that there is no class of plants about which an increase of knowledge is more imperative than these same ugly weeds. A few dollars expended in awards by each fair association would bring together lists of plant pests, the exhibition of which would not only surprise but greatly instruct those who see them. It is not less important for the farmers of any district to know of the arrival of a new weed than of the advent of a new fruit or grain."